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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,319	10/03/2002	John Graf	126342-1	9308

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EXAMINER

TSIDULKO, MARK

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,319

Applicant(s)

GRAF ET AL.

Examiner

Mark Tsidulko

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 10, 11, 14, 15, 19, 20, 23, 24 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 3-5, 8, 9, 12, 13, 16-18, 21, 22, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03032004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pseudo-randomized prism structure must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: specification do not disclose a *pseudo-randomized prism structure*, claimed in a claim 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 6, 7, 15, 19, 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Since the claims disclose a group of elements it is indefinite does diffuser material have one of them or all of them?

Art Unit: 2875

Referring to Claims 2, 3, 15, and 16 the “alkyl groups” I s indefinite because they do not apply to at least silicone, zinc, antimony, titanium and barium.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 7, as best understood, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US 5,394,255) in view of Honda et al. (US 2001/0022997).

Referring to Claims 1, 6, 7 Yokota et al. disclose a LCD including a light-adjusting sheet made of material that includes 3% of titanium oxide powder for diffusing a light based on the total weight of polycarbonate (col.17, lines 18-33), so that the quantity of the polycarbonate in the compound is: 100% - 3% = 97%.

Yokota et al. discloses the instant claimed invention except for that the diffuser material has at least 70% of transmittance and a haze of at least 10%.

Honda et al. disclose a diffusion sheet made of material having a haze value 10% or more and notes that preferable transmittance is 80%.

Referring to Claims 27-29 Yokota et al. disclose a LCD including a film having a prismatic (Fig.5) surface including a peak angle, a height, a pitch and a length and a planar (Fig.4) surface.

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the combination of parameters of the materials of Yokota et al. and Honda et al. in order to obtain the material with high diffusing characteristic.

Claim 2, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. and Honda et al. as applied to claim 1 above, and further in view of McDaniel (US 4,368,303).

Yokota et al. discloses the instant claimed invention except for titanium wherein alkyl groups have 1 to 12 carbon atoms.

McDaniel discloses the titanium wherein alkyl groups have 1 to 7 carbon atoms (claim 18).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the titanium having alkyl groups, as taught by McDaniel for the diffuser material of Yokota et al. for the polymerization.

Claims 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. and Honda et al. as applied to claim 1 above, and further in view of Abe et al. (US 4,152,618).

Yokota et al. discloses the instant claimed invention except for that diffuser material is film having thickness of about 0.025mm to 0.5mm.

Abe et al. disclose a diffusing film having a thickness 0.15 mm.

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the a diffusing film of Abe et al. as a diffusing material for the device of Yokota et al. for the purpose of diffusing the light.

Claims 14 and 19, 20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US 5,394,255) in view of Honda et al. (US 2001/0022997).

Yokota et al. disclose (Fig.4) a LCD including a light source [33], a light guide plate [32], a reflective plate [34] a light-adjusting sheet [50] which diffuses the light (col.17, line 29) and made of material that includes 3% of titanium oxide powder for diffusing a light based on the total weight of polycarbonate (col.17, lines 18-24), so that the quantity of the polycarbonate in the compound is: 100% - 3% = 97%.

Yokota et al. discloses the instant claimed invention except for that the diffuser material has at least 70% of transmittance and a haze of at least 10%.

Honda et al. disclose a diffusion sheet made of material having a haze value 10% or more and notes that preferable transmittance is 80%.

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the combination of parameters of the materials of Yokota et al. and Honda et al. in order to obtain the material with high diffusing characteristic.

Claim 15, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. and Honda et al. as applied to claim 1 above, and further in view of McDaniel (US 4,368,303).

Yokota et al. discloses the instant claimed invention except for titanium wherein alkyl groups have 1 to 12 carbon atoms.

McDaniel discloses the titanium wherein alkyl groups have 1 to 7 carbon atoms (claim 18).

Art Unit: 2875

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the titanium having alkyl groups, as taught by McDaniel for the diffuser material of Yokota et al. for the polymerization.

Claims 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. and Honda et al. as applied to claim 1 above, and further in view of Abe et al. (US 4,152,618).

Yokota et al. discloses the instant claimed invention except for that diffuser material is film having thickness of about 0.025mm to 0.5mm.

Abe et al. disclose a diffusing film having a thickness 0.15 mm.

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the a diffusing film of Abe et al. as a diffusing material for the device of Yokota et al. for the purpose of diffusing the light.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. and Honda et al. as applied to claim 1 above, and further in view of Liu et al. (US 46,208,466).

Yokota et al. discloses the instant claimed invention except for pseudo-randomized structure of a diffuser.

Liu et al. disclose a diffuser having a pseudo-randomized structure in order to form localized geometrical variations (col.14, lines 2-7).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the pseudo-randomized structure for the diffuser, as taught by Liu et al. for the device of Yokota et al. in order to form localized geometrical variations.

Allowable Subject Matter

Claims 3-5, 8, 9, 12, 13, 16-18, 21, 22, 25, 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Referring to Claims 3, 16 the prior art of record fails to show a light diffusing particles having a polyacrylate, a polyalkyl methacrylate, a polytetrafluoroethylene, a silicone or mixture thereof, wherein the alkyl groups have 1 to about 12 carbon atoms.

Claims 8, 9, 12, 13 are objected as claim depended on claim 3.

Claims 21, 22, 25, 26 are objected as claim depended on claim 16.

Referring to Claims 4, 17 the prior art of record fails to show that a polyalkyl methacrylate has a polymethyl methacrylate.

Referring to Claim 5, 18 the prior art of record fails to show a diffuser material wherein a silicon has hydrolyzed polyalkyl trialkoxysilane.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Tsidulko whose telephone number is (571)272-2384. The examiner can normally be reached on 8 - 5.

Art Unit: 2875

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.T.
March 1, 2004


ALAN CARIASO
PRIMARY EXAMINER